



October 31, 2013

Fed Ex overnight

BP Products North America Inc.
2815 Indianapolis Blvd.
P.O. Box 710
Whiting, IN 46394-0710
USA

Mr. Paul Higginbotham
Indiana Department of Environmental Management
Office of Water Quality – Permits Branch
100 N. Senate Avenue
Mail Code 65-42
Indianapolis, IN 46204-2251

Subject: BP Whiting Business Unit Brine Treatment Unit (BTU) Notice of installation for additional pollution control equipment and design summary of modifications to the WWTP

Dear Mr. Higginbotham:

Per our NPDES Permit No IN0000108 Part II General Condition number (15), BP Whiting Business Unit is submitting a notice of installation and design summary changes for our Waste Water Treatment Plant (WWTP) operations. Please find enclosed an updated process flow diagram for the newly installed Brine Treatment Unit (BTU). The BTU began start up operations on October 12, 2013. The BTU is designed to separate the oil and solids from the crude unit desalter brine to minimize negative impacts to the waste water treatment system by removing as much as possible prior to treating the brine through the WWTP.

Please refer to the attached process flow diagrams for the following description of the BTU process. Brine from the refinery's desalters is first pretreated with coagulant and flocculants to create particles consisting of oil and solids which can be separated by a gas (nitrogen) flotation process. Flotation occurs in as many as three gas flotation tanks (Tanks 101, 102 and 103) which are operated in parallel. In these tanks, micro bubbles, which are created in a recycle stream of BTU effluent by inducing nitrogen through a specially designed pump, float the oily particles into a float layer which is skimmed from the surface of these tanks into a float holding tank (TK 104). The float is subsequently processed in the wastewater treatment plant's solids handling system, in which centrifugation is used to dewater the float. The BTU effluent water is sent to the front of the WWTP where it is combined with refinery wastewater for further treatment through the whole WWTP.

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BP Whiting Business Unit
Brine Treatment Unit (BTU) Notice of installation

The BTU is one of several upgrades that were planned and previously discussed with your department during the 2007 NPDES renewal. Previous start up and installation notices to your office were given regarding additional waste water equalization Tank 5052 in 2009, the diffuser in 2010 and Final Filters in 2012. This is the last upgrade for the waste water treatment plant as planned.

Please contact Rose Herrera (219) 473-3393 if you have any questions regarding this notice.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering in the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



Nick Spencer
Whiting Business Unit Leader

Attachments

Copy: Steve Roush, IDEM Office of Water Quality Permits Branch.



